UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,445	12/09/2004	Toshihiro Nishii	2004-1930A	8623

52349 7590 04/13/2009

WENDEROTH, LIND & PONACK L.L.P.
1030 15th Street, N.W.
Suite 400 East
Washington, DC 20005-1503

EXAMINER	
NGUYEN, DONGHAI D	
ART UNIT	PAPER NUMBER
3729	

MAIL DATE	DELIVERY MODE
04/13/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/517,445
Filing Date: December 09, 2004
Appellant(s): NISHII ET AL.

Walter C. Pledger
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on January 21, 2009 appealing from the Office action mailed on September 5, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after the Office Action dated September 5, 2008 has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

7,063,768	Tsujimoto et al.	7-2006

Appellants' disclosure, pp. 1-4 and Figs. 6-10

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 17-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appellants' Admitted Prior Art in view of US Patent 7,063,768 to Tsujimoto et al.

Regarding claim 17, AAPA discloses a method of manufacturing a circuit forming board, comprising: impregnating an elongated reinforcing member (11) with impregnation material (12), the reinforcing member extending in a first direction (202, see Fig. 6); transferring the reinforcing member in a second direction (201) such that the first direction of the reinforcing member is parallel to the second direction (see Fig. 6), wherein said impregnating of the elongated reinforcing member (11) with impregnation material (12) occurs simultaneously with said transferring of the reinforcing member (11) in the second direction (201, see Fig. 6); adhering films (14) directly onto an upper surface and a lower surface, respectively, of the reinforcing member (see Fig. 7) so as to be entirely peelable off of the upper and lower surfaces of the reinforcing member (see Figs. 9C-D); transferring the reinforcing member in a third direction, wherein said adhering of the films (14) directly onto the upper surface and the lower surface, respectively, of the reinforcing member occurs simultaneously with said transferring of the reinforcing member in the third direction (see Fig. 7). AAPA does not disclose the third direction is orthogonal to the first direction of the reinforcing member. Tsujimoto et al. teach the step of transferring the reinforcing member (C) in a third direction (top to bottom) orthogonal to the first direction (left to right) of the reinforcing member (C, see Fig. 21) while attaching the films (S1) to reinforcing member (C) for providing good thickness precision (See Col. 19, lines 22-23 or Col. 37, line 34) in the reinforcing member (C). Therefore, it would have been obvious

to one having ordinary skill in the art at the time the invention was made to modify the AAPA by utilized the transferring the reinforcing member in the third direction orthogonal to the first direction of the reinforcing member as taught by Tsujimoto et al. to obtain a circuit board having good thickness precision.

Regarding claim 18, AAPA discloses pressing the films (14) onto the upper surface and the lower surface, respectively, of the reinforcing member with a heated roller (15).

Regarding claim 19, AAPA discloses the reinforcing member (11) comprises woven fabric (see page 1, line 17).

Regarding claim 20, AAPA discloses forming a via-hole (7) in the reinforcing member (13) and the films (14) adhered on the upper surface and the lower surface of the reinforcing member; filling the via-hole with conductive paste (18); peeling off the films from the reinforcing member (see Fig. 9D); and heating and pressing metallic foils (19) onto the upper surface and the lower surface, respectively, of the reinforcing member after said peeling off of the films (see Figs. 9C-F).

Regarding claim 22, AAPA discloses the reinforcing member (11) has a side which extends in the first direction (201, see Fig. 6).

Regarding claim 23, AAPA disclose transferring each of a plurality of separate reinforcing member segments (13, see Fig. 6) in the second direction, each of the plurality of reinforcing member segments (13) extending in the first direction; adhering films (14) onto an upper surface and a lower surface, respectively, of each of the plurality of separate reinforcing member segments (13), and transferring each of the plurality of separate reinforcing member segments(13) in the third direction (see Fig. 7 and rejection of claim 17 above).

Regarding claim 24, AAPA discloses adhering continuous films (14) onto the upper surface and the lower surface, respectively, of each of the plurality of separate reinforcing member segments (13, see Fig. 7).

Regarding claim 25, AAPA discloses impregnating a fiber sheet (11) with a resin (12), by squeezing a part of the impregnated resin such that the impregnated resin is in a semi-cured state after said squeezing of the part of the impregnated resin, wherein said squeezing of the part of the impregnated resin occurs simultaneously with said transferring of the reinforcing member in the second direction (see Fig. 6 and page 1, lines 20-22); and cutting the fiber sheet into the plurality of separate reinforcing member segments (13) after the impregnated resin is in the semi-cured state (see Fig. 6).

Regarding claim 26, AAPA discloses the reinforcing member is a prepreg sheet (13, see Page 1, line 24).

Regarding claims 27 and 28, AAPA discloses the reinforcing member comprises a fiber sheet (see page 1, lines 16-17), and impregnating the fiber sheet (11) with a resin (12), by squeezing a part of the impregnated resin (12, see page 1, line 21), wherein said squeezing of the part of the impregnated resin occurs simultaneously with said transferring of the reinforcing member in the second direction (see Fig. 6), and wherein the impregnated resin is in a semi-cured state after said squeezing of the part of the impregnated resin (see page 1, lines 21-22) and cutting the fiber sheet into a plurality of separate reinforcing members after the impregnated resin is in the semi-cured state (see Fig. 6).

Regarding claim 21, AAPA/Tsujimoto discloses the reinforcing member has a rectangular shape having a long-side direction and a short-side direction, except for the long-side direction is orthogonal to the first direction of the reinforcing member. It would have been an obvious matter of design choice to one having ordinary skill in the art the time the invention was made to choose the long side or short side of the reinforcing member is orthogonal to the first direction, since Applicants have not disclose the specific side of the first sheet is orthogonal to the first direction, solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the first direction as disclosed by AAPA/Tsujimoto et al.

(10) Response to Argument

Appellants argue that "AAPA also does not disclose that the adhering of the films directly onto the upper surface and the lower surface, respectively, of the reinforcing member occurs simultaneously with the transferring of the reinforcing member in the third direction orthogonal to the first direction of the reinforcing member" and "Tsujimoto et al does not disclose transferring the reinforcing member in a third direction orthogonal to the first direction occurs simultaneously with adhering films directly onto an upper surface and a lower surface, respectively, of the reinforcing member".

The Examiner disagrees because Appellants argue against the references individually; it has been held that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Tsujimoto et al teach the limitation of transferring the reinforcing member (C) in a

third direction orthogonal to the first direction occurs simultaneously with adhering films directly onto an upper surface and a lower surface, respectively, of the reinforcing member (at least one film is on at least one surface see Col. 51, lines 63-66 and Figs. 21 and 22) for producing a resin sheet with high thickness precision (see Col. 3, lines 3-7); and AAPA discloses simultaneously adhering films directly onto an upper surface and a lower surface, respectively, of the reinforcing member so as to be entirely peelable off the upper and lower surfaces of the reinforcing member (see Fig. 7) for forming a circuit board. The rationale for the combination is clearly set forth above in the rejection.

Appellants argue, "Tsujimoto et al. do not disclose that the transferring of the core material C in the direction perpendicular to the longitudinal direction results in a good thickness precision". The Examiner disagrees since Col. 3, lines 3-7 of Tsujimoto et al. discloses the object of the present invention is to provide a composite with a high thickness precision. Also Col. 49 line 20 to Col. 51 line 59 and Figs. 21 and 21 of Tsujimoto et al. disclose two examples for achieving the above object by transferring the reinforcing member (C) in a third direction orthogonal to the first direction. Further, Tsujimoto et al. disclose the uniformed thickness of the laminated structure cannot be obtained by controlling laminated pressure and temperature (see Col. 2, lines 7-13) but by compressing/laminating the core material in longitudinal direction and lateral direction (see Figs. 21 and 22) such that the anisotropy in the longitudinal direction and lateral direction is canceled (see Col. 2, lines 50-58) thereby obtain the uniformed thickness in the laminated structure.

Appellants argue that "Tsujimoto is directed to a method of producing a laminated composite which is used as a civil engineering and construction material, and in particular, as a tatami mat core material for the floor of a house" is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Tsujimoto et al. disclose the laminated composite is made of the same material (i.e. thermosetting resin, see Col. 7, lines 16-19) as disclosed by Appellants (see Page 10, lines 6-15). Furthermore, Tsujimoto et al. solve the same problem (i.e. thickness precision of the laminated structure) as Appellants in same manner (i.e. transferring the reinforcing member (C) in a third direction orthogonal to the first direction) as Appellants. Tsujimoto is thus directed to analogous art.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

DN,

/Donghai D. Nguyen/

Primary Examiner, Art Unit 3729

March 26, 2009

Conferees:

/Thomas Denion/

SPE AU 3748

/DAVID P. BRYANT/

Supervisory Patent Examiner, Art Unit 3726